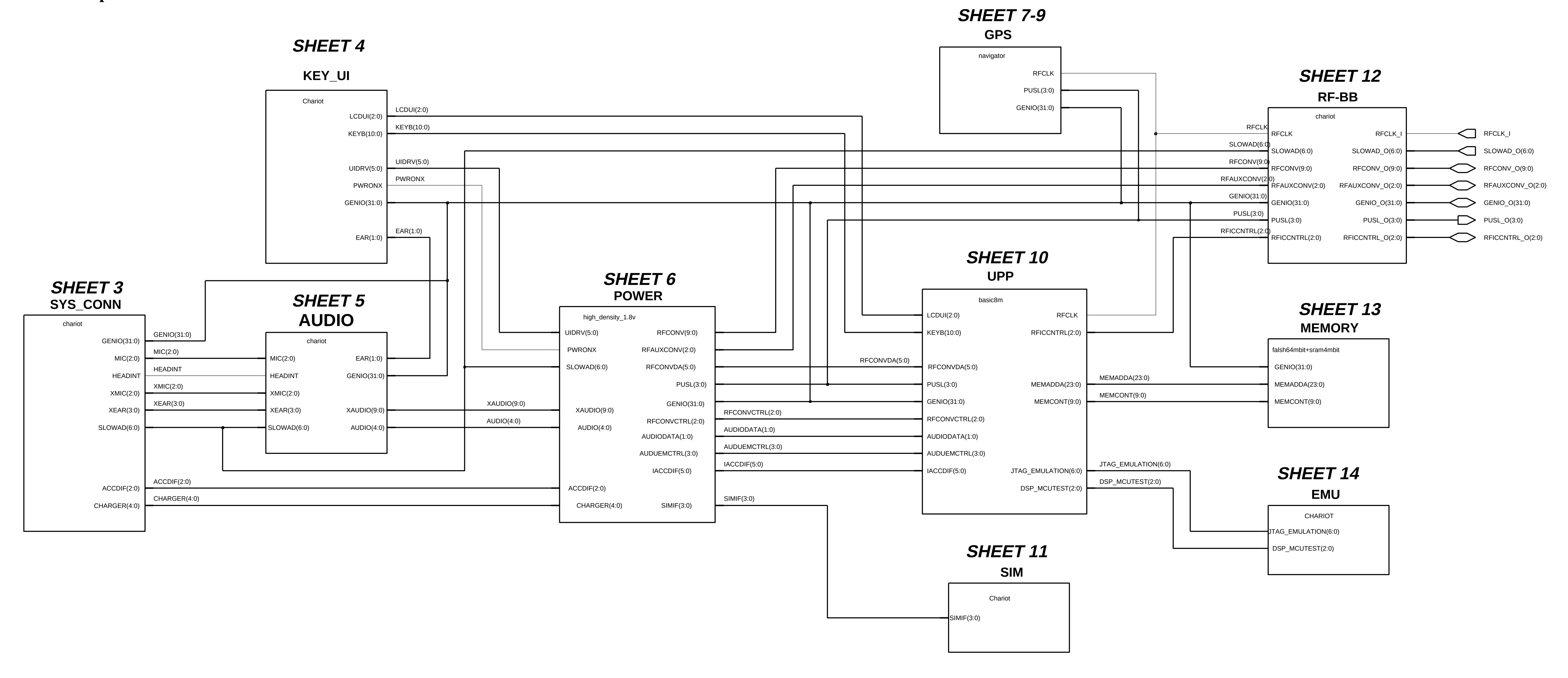
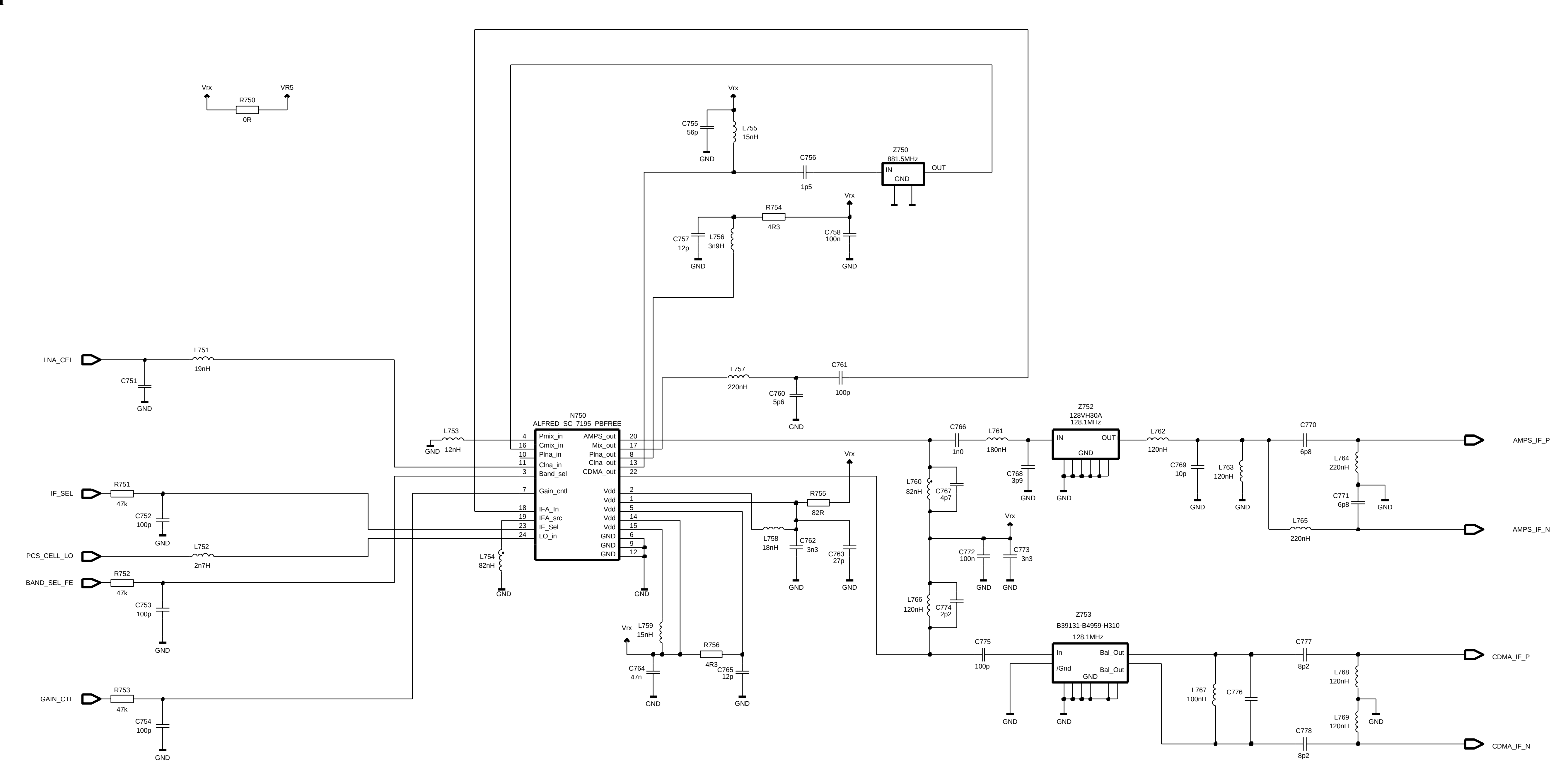
6012 Schematics

Baseband - Top



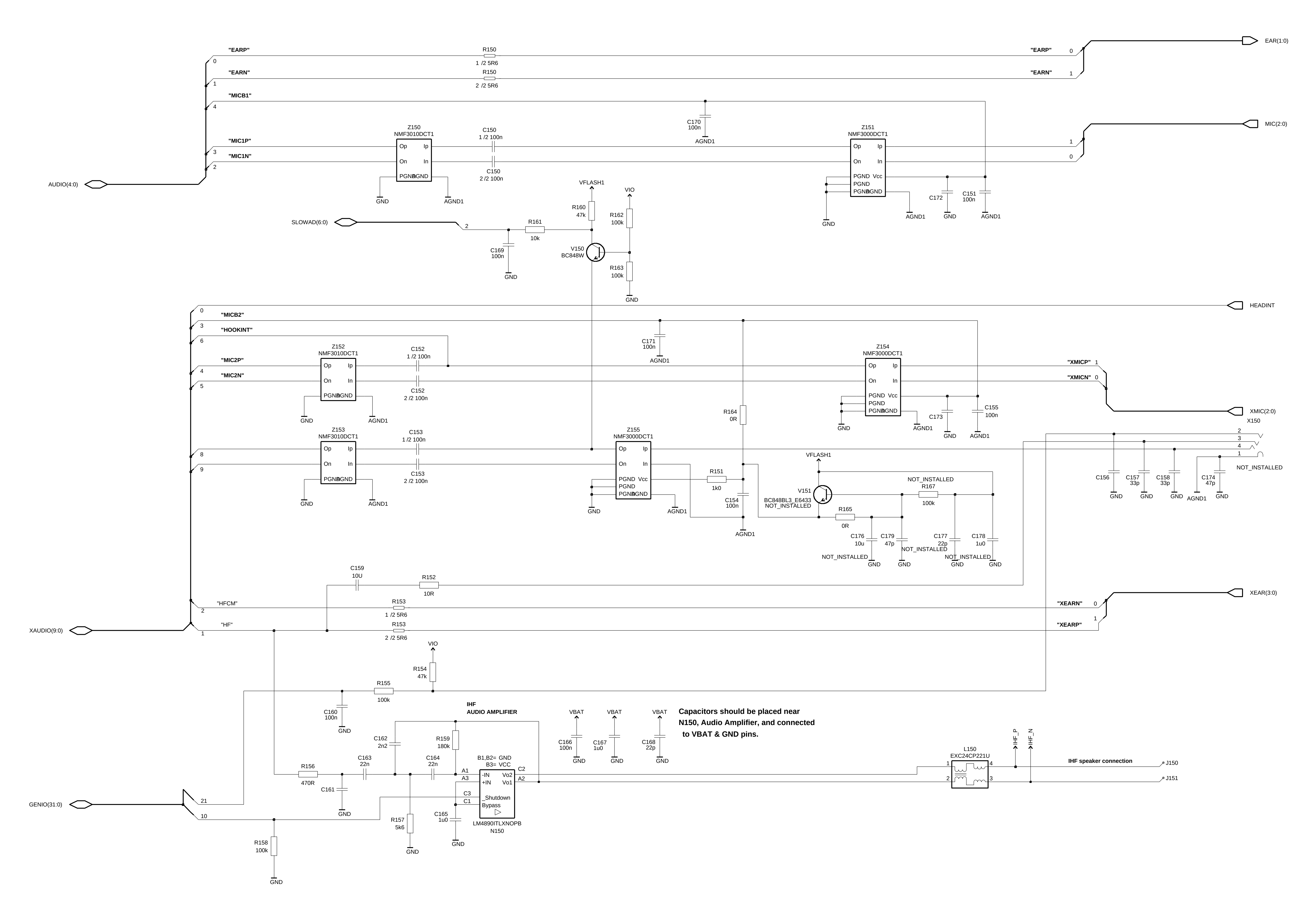
Front End



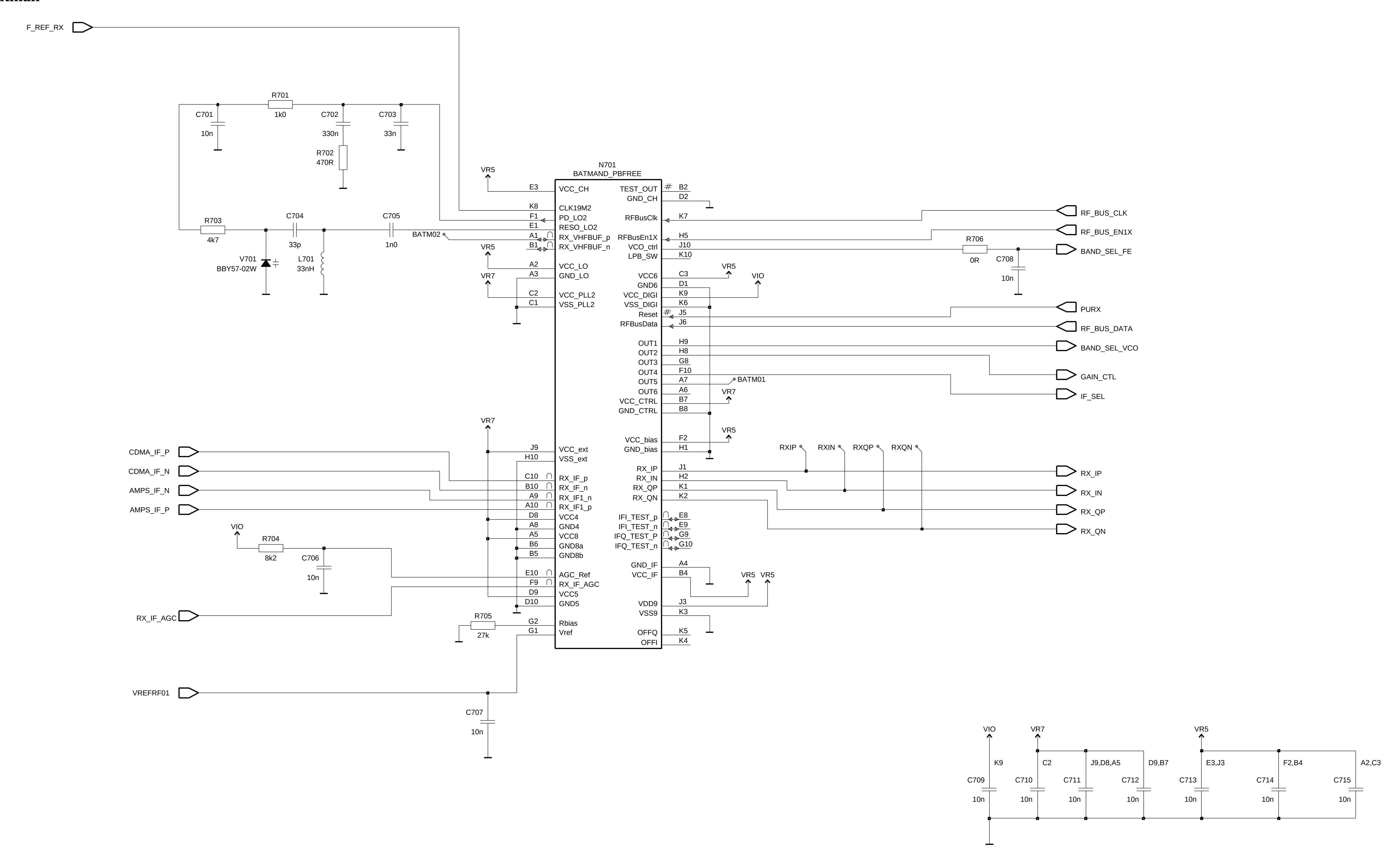
	LOGIC INPUTS		
MODES	BAND	GAIN_CTL	IF_SEL
CEL CDMA Hi Gain	0	1	0
CEL CDMA Lo Gain	0	0	0
PCS CDMA Hi Gain	1	1	0
PCS CDMA Lo Gain	1	0	0
AMPS Hi Gain	0	1	1
AMPS Lo Gain	0	0	1

VARIANT DNI	
HDB91 800	HDC93 1900
C750 C759 L750 Z751	*C751 C756 C766 C768 C769 C770 C771 L751 L761 L762 L763 L764 L765 Z750 Z752*

Audio

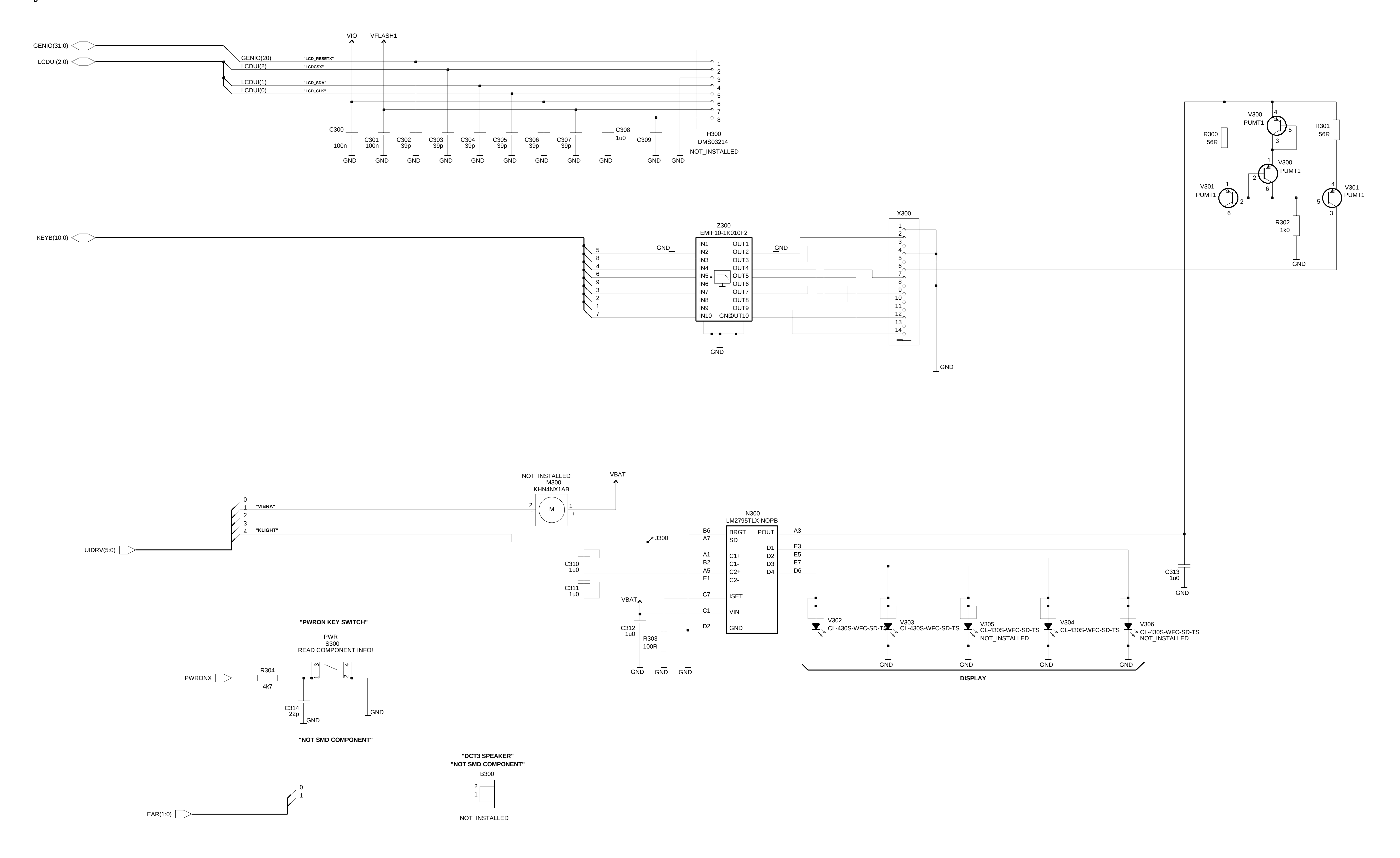

AUDIO(4:0)
SLOWAD(6:0)
XAUDIO(9:0)
GENIO(31:0)
EAR(1:0)
MIC(2:0)
HEADINT
XMIC(2:0)
XEAR(3:0)
"EARP"
"EARN"
"MICB1"
"MIC1P"
"MIC1N"
"MICB2"
"HOOKINT"
"MIC2P"
"MIC2N"
"HFCM"
"HF"
"XMICP"
"XMICN"
"XEARN"
"XEARP"
Z150 NMF3010DCT1
Z151 NMF3000DCT1
Z152 NMF3010DCT1
Z153 NMF3010DCT1
Z154 NMF3000DCT1
Z155 NMF3000DCT1
V150 BC848W
V151 BC848BL3_E6433 NOT_INSTALLED
VFLASH1
VIO
VBAT
X150
NOT_INSTALLED
IHF AUDIO AMPLIFIER
LM4890ITLXNOPB N150
L150 EXC24CP221U
IHF speaker connection
J150
J151
IHF_P
IHF_N
Capacitors should be placed near N150, Audio Amplifier, and connected to VBAT & GND pins.

Batman

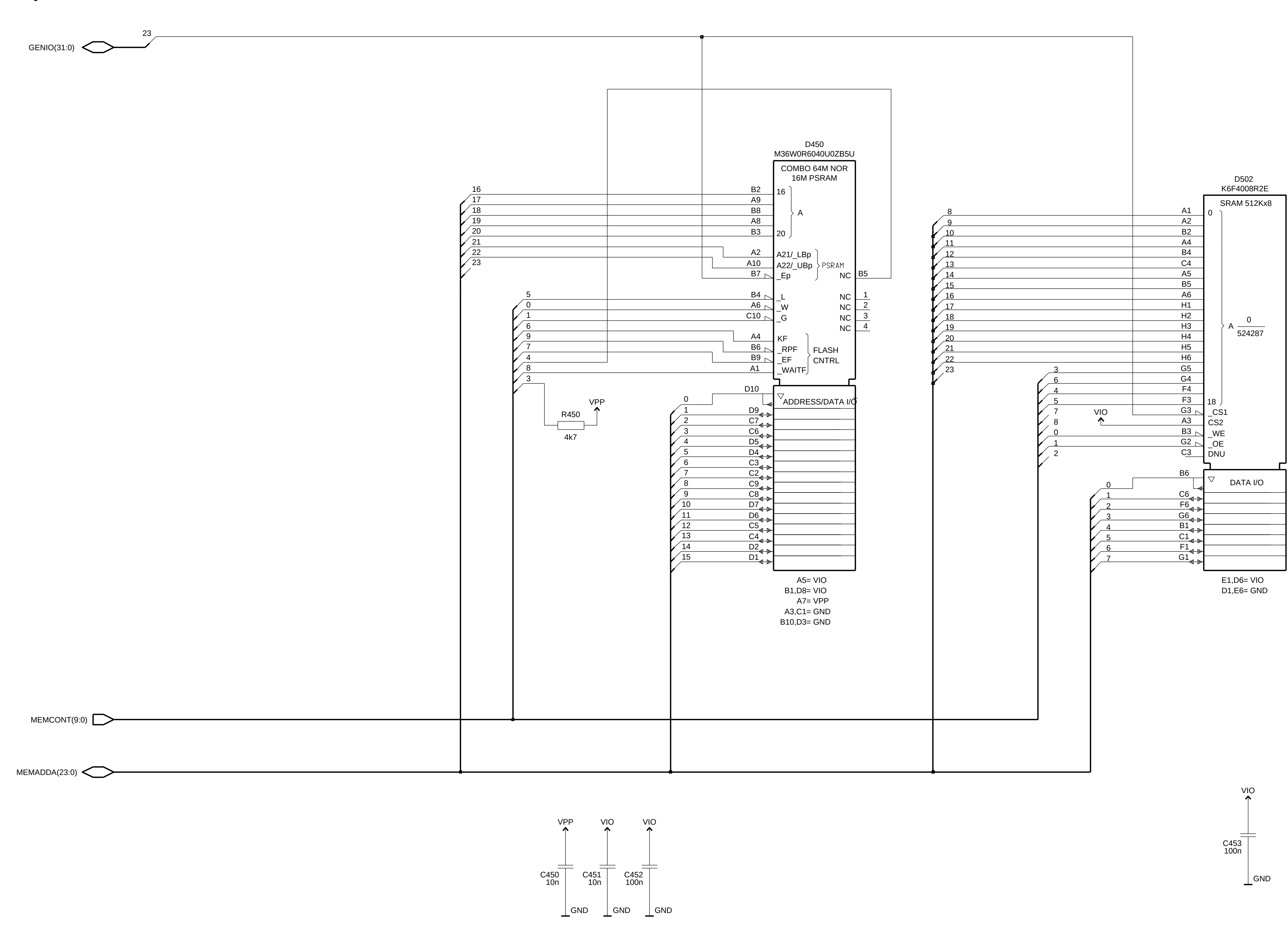


F_REF_RX
R701
1k0
C701
10n
C702
330n
C703
33n
R702
470R
N701
BATMAND_PBFREE
VR5
R703
4k7
C704
33p
C705
1n0
V701
BBY57-02W
L701
33nH
BATM02
VCC_CH
CLK19M2
PD_LO2
RESO_LO2
RX_VHFBUF_p
RX_VHFBUF_n
VCC_LO
GND_LO
VCC_PLL2
VSS_PLL2
TEST_OUT
GND_CH
RFBusClk
RFBusEn1X
VCO_ctrl
LPB_SW
VCC6
GND6
VCC_DIGI
VSS_DIGI
Reset
RFBusData
OUT1
OUT2
OUT3
OUT4
OUT5
OUT6
VCC_CTRL
GND_CTRL
VCC_bias
GND_bias
RX_IP
RX_IN
RX_QP
RX_QN
IFI_TEST_p
IFI_TEST_n
IFQ_TEST_P
IFQ_TEST_n
GND_IF
VCC_IF
VDD9
VSS9
OFFQ
OFFI
RF_BUS_CLK
RF_BUS_EN1X
R706
0R
C708
10n
BAND_SEL_FE
PURX
RF_BUS_DATA
BAND_SEL_VCO
GAIN_CTL
IF_SEL
BATM01
VR7
VIO
CDMA_IF_P
CDMA_IF_N
AMPS_IF_N
AMPS_IF_P
VCC_ext
VSS_ext
RX_IF_p
RX_IF_n
RX_IF1_n
RX_IF1_p
VCC4
GND4
VCC8
GND8a
GND8b
AGC_Ref
RX_IF_AGC
VCC5
GND5
Rbias
Vref
R704
8k2
C706
10n
RX_IF_AGC
R705
27k
VREFRF01
C707
10n
RXIP
RXIN
RXQP
RXQN
RX_IP
RX_IN
RX_QP
RX_QN
C709
C710
C711
C712
C713
C714
C715
10n
K9
C2
J9,D8,A5
D9,B7
E3,J3
F2,B4
A2,C3

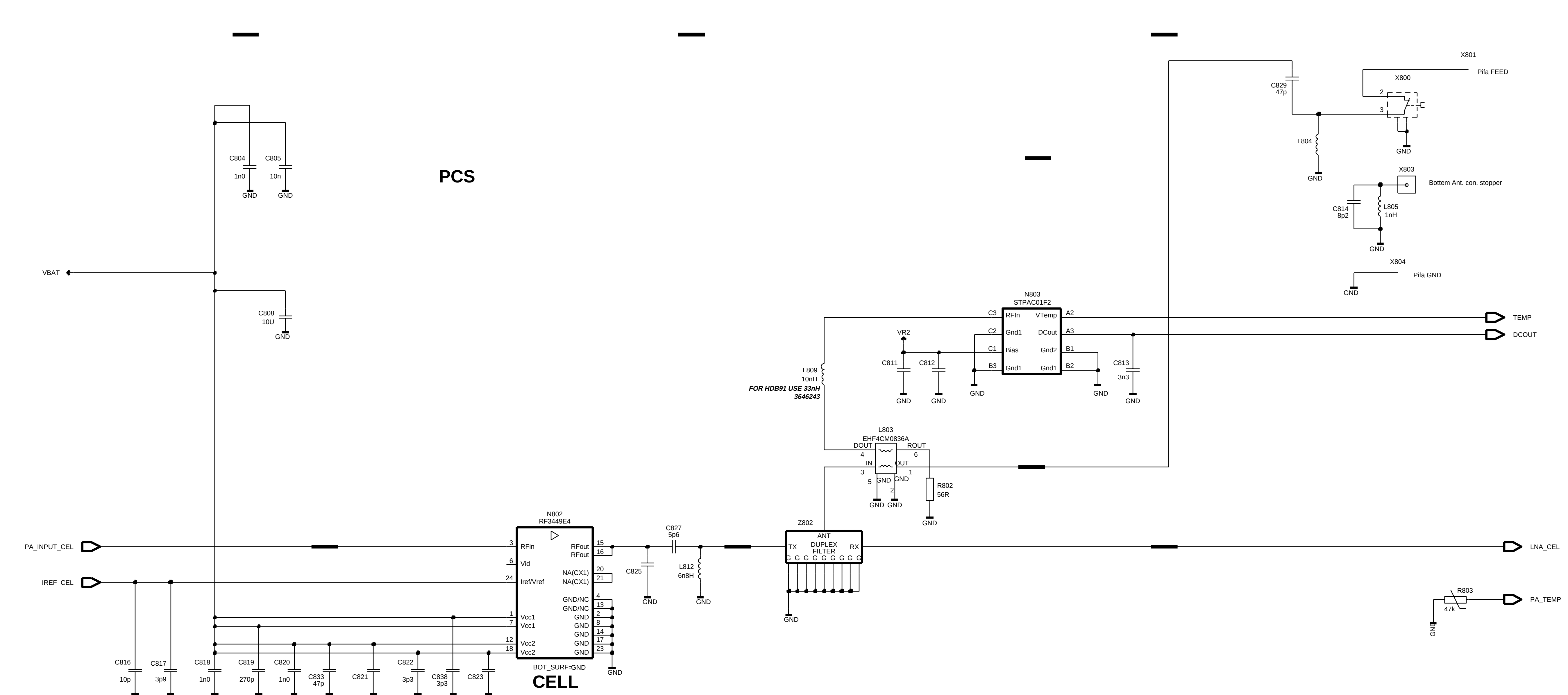
Key UI


GENIO(31:0)
LCDUI(2:0)
KEYB(10:0)
UIDRV(5:0)
PWRONX
EAR(1:0)
VIO
VFLASH1
H300
DMS03214
NOT_INSTALLED
Z300
EMIF10-1K010F2
X300
N300
LM2795TLX-NOPB
M300
KHN4NX1AB
"VIBRA"
"KLIGHT"
"PWRON KEY SWITCH"
PWR
S300
READ COMPONENT INFO!
"NOT SMD COMPONENT"
"DCT3 SPEAKER"
B300
DISPLAY
GND
VBAT

Memory

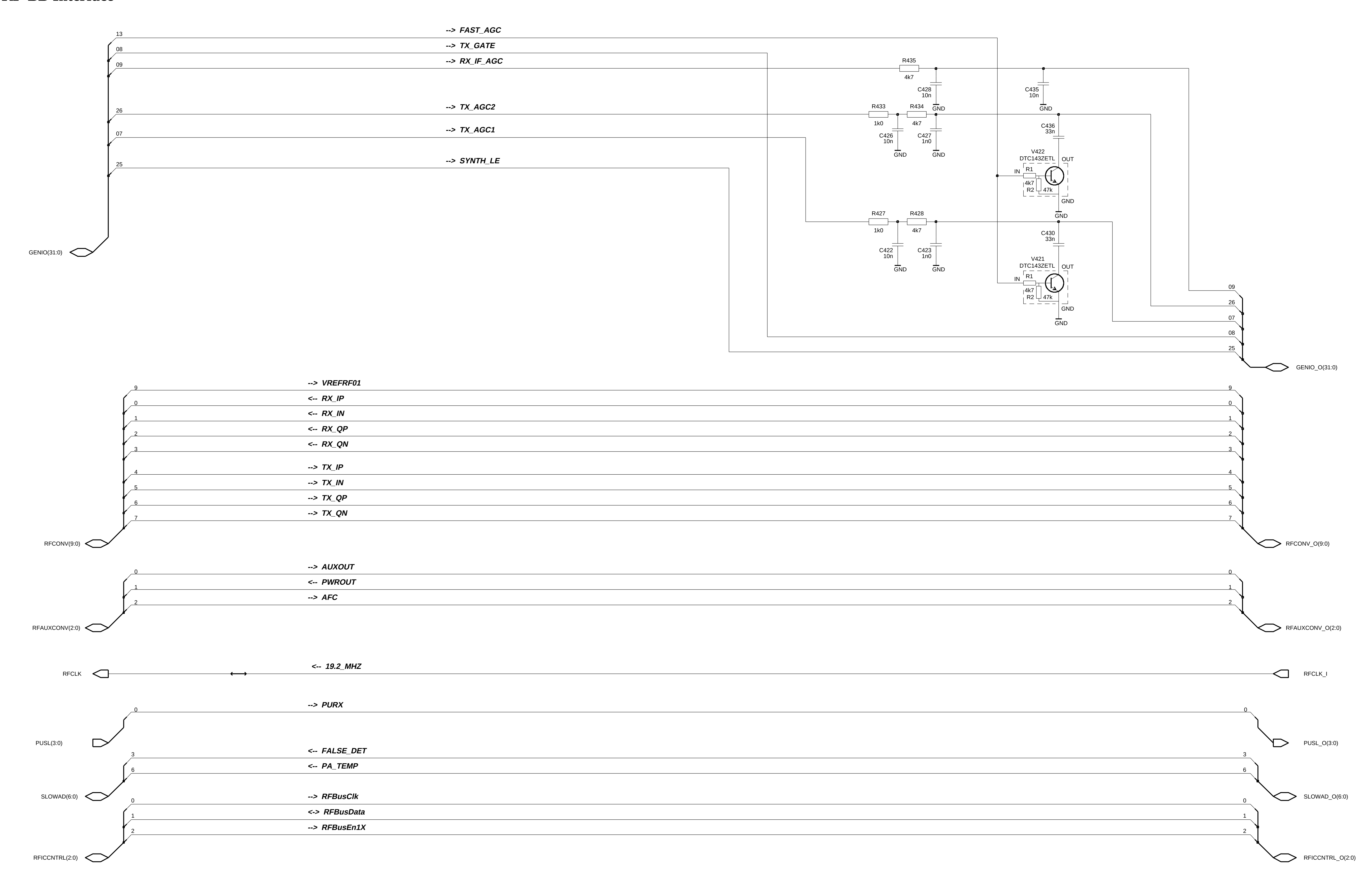

GENIO(31:0)
MEMCONT(9:0)
MEMADDA(23:0)
D450
M36W0R6040U0ZB5U
COMBO 64M NOR
16M PSRAM
A21/_LBp
A22/_UBp
PSRAM
_Ep
_L
_W
_G
KF
_RPF
_EF
_WAITF
FLASH
CNTRL
ADDRESS/DATA I/O
A5= VIO
B1,D8= VIO
A7= VPP
A3,C1= GND
B10,D3= GND
R450
4k7
VPP
D502
K6F4008R2E
SRAM 512Kx8
524287
_CS1
CS2
_WE
_OE
DNU
DATA I/O
VIO
E1,D6= VIO
D1,E6= GND
C450
10n
C451
10n
C452
100n
C453
100n
GND

PA

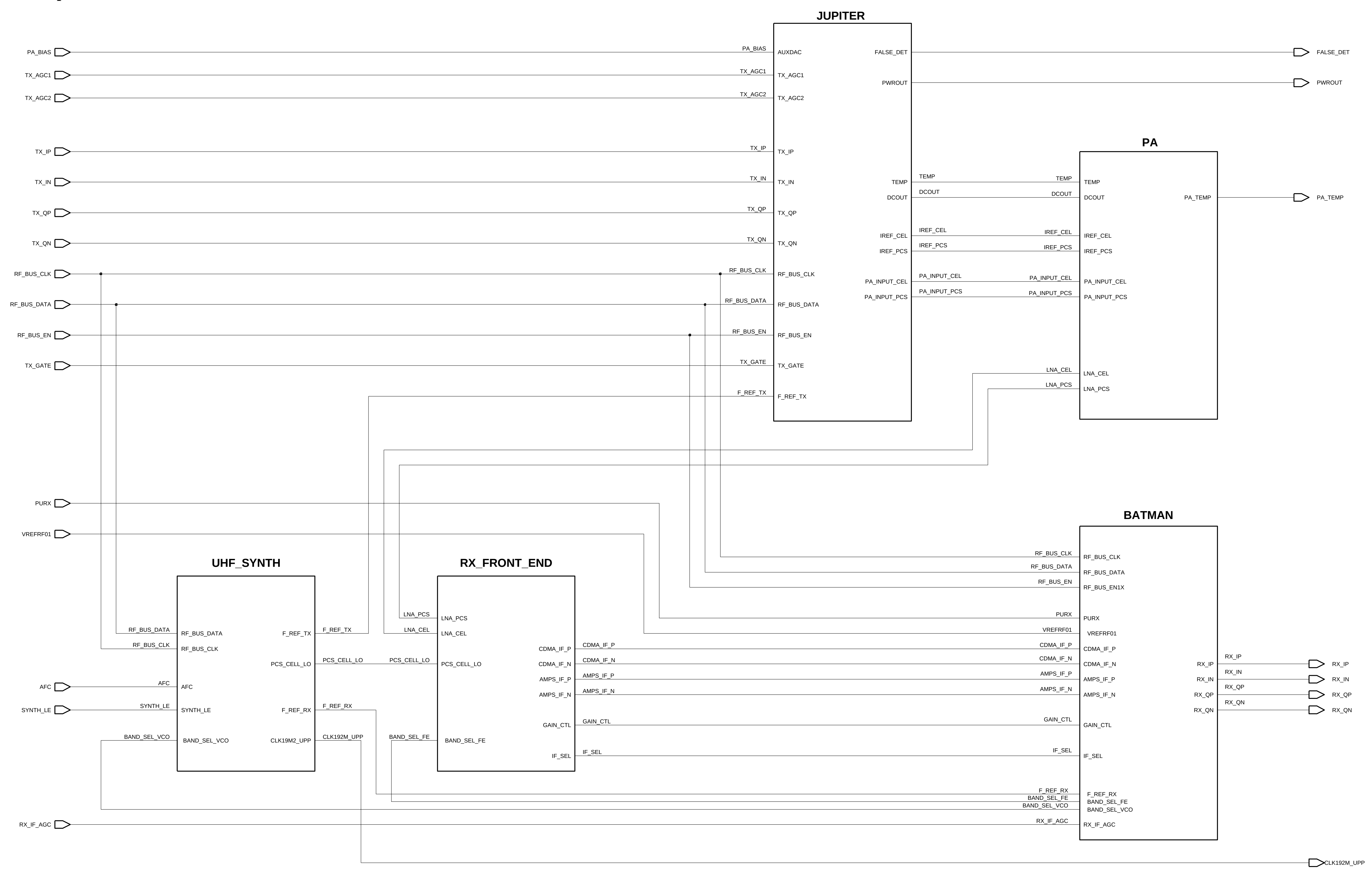


VARIANT DNI		
HDC91 DB	HDB91 800	HDC93 1900
C828	C802	C816
C829	C803	C817
	C804	C818
	C805	C819
	C806	C820
	C807	C821
	C809	C822
	C810	C823
	C828	C825
	C837	C827
	L802	C829
	L810	C833
	N801	C838
	R801	L803
	R804	L808
	Z800	L811
	Z801	R802
		Z800
		Z802

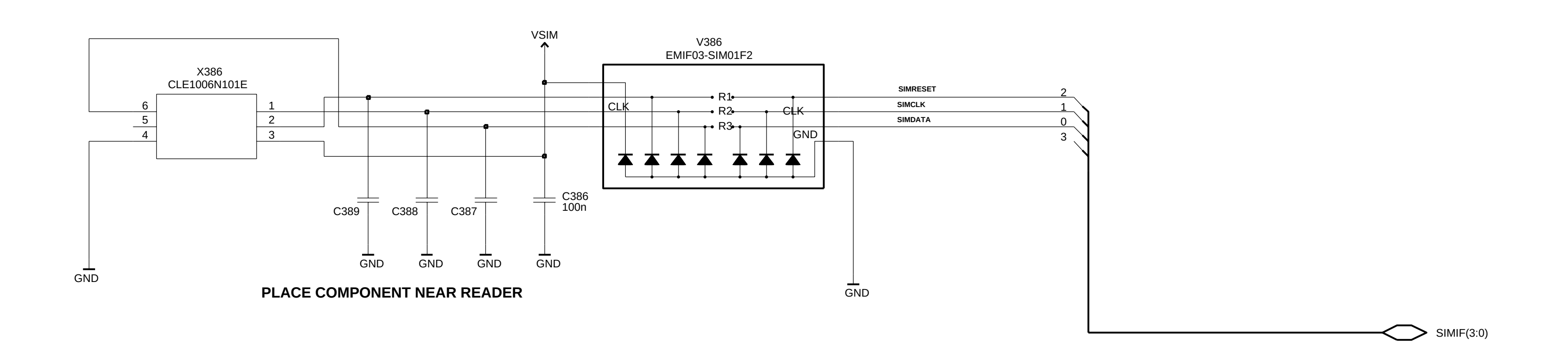
RF-BB Interface



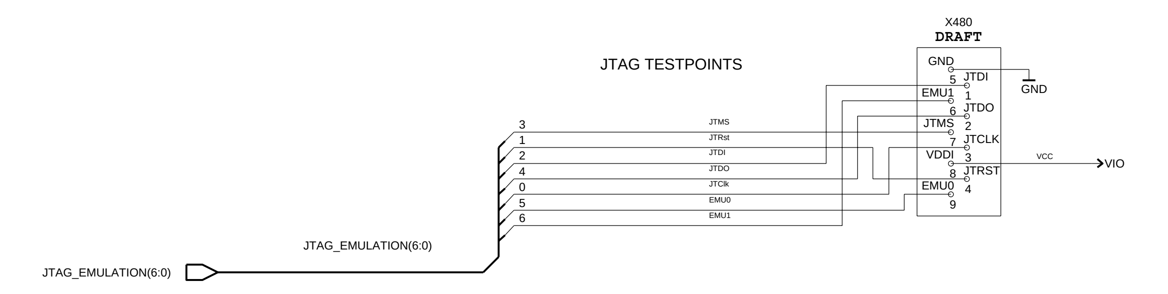
RF - Top


JUPITER
PA
BATMAN
UHF_SYNTH
RX_FRONT_END
PA_BIAS
TX_AGC1
TX_AGC2
TX_IP
TX_IN
TX_QP
TX_QN
RF_BUS_CLK
RF_BUS_DATA
RF_BUS_EN
TX_GATE
F_REF_TX
AUXDAC
FALSE_DET
PWROUT
TEMP
DCOUT
IREF_CEL
IREF_PCS
PA_INPUT_CEL
PA_INPUT_PCS
PA_TEMP
LNA_CEL
LNA_PCS
PURX
VREFRF01
RF_BUS_EN1X
CDMA_IF_P
CDMA_IF_N
AMPS_IF_P
AMPS_IF_N
GAIN_CTL
IF_SEL
RX_IP
RX_IN
RX_QP
RX_QN
F_REF_RX
BAND_SEL_FE
BAND_SEL_VCO
RX_IF_AGC
PCS_CELL_LO
AFC
SYNTH_LE
CLK19M2_UPP
CLK192M_UPP

SIM



Test and Emulator Interface





System Connector

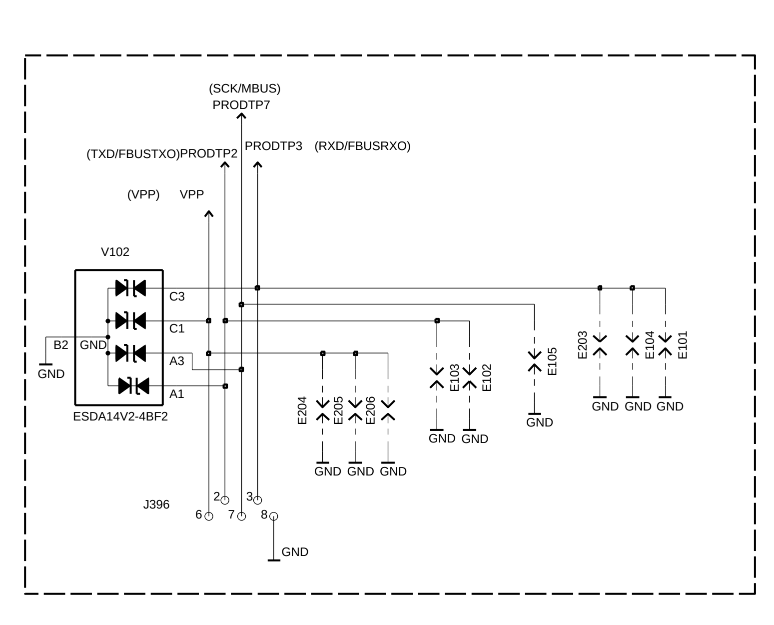
TEST POINTS FOR BATTERY

TOMAHAWK BOTTOM CONNECTOR

Tomahawk Charger connector

Tomahawk System connector

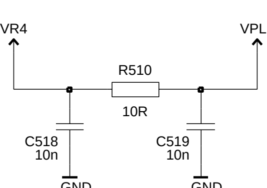
Microphone contacts



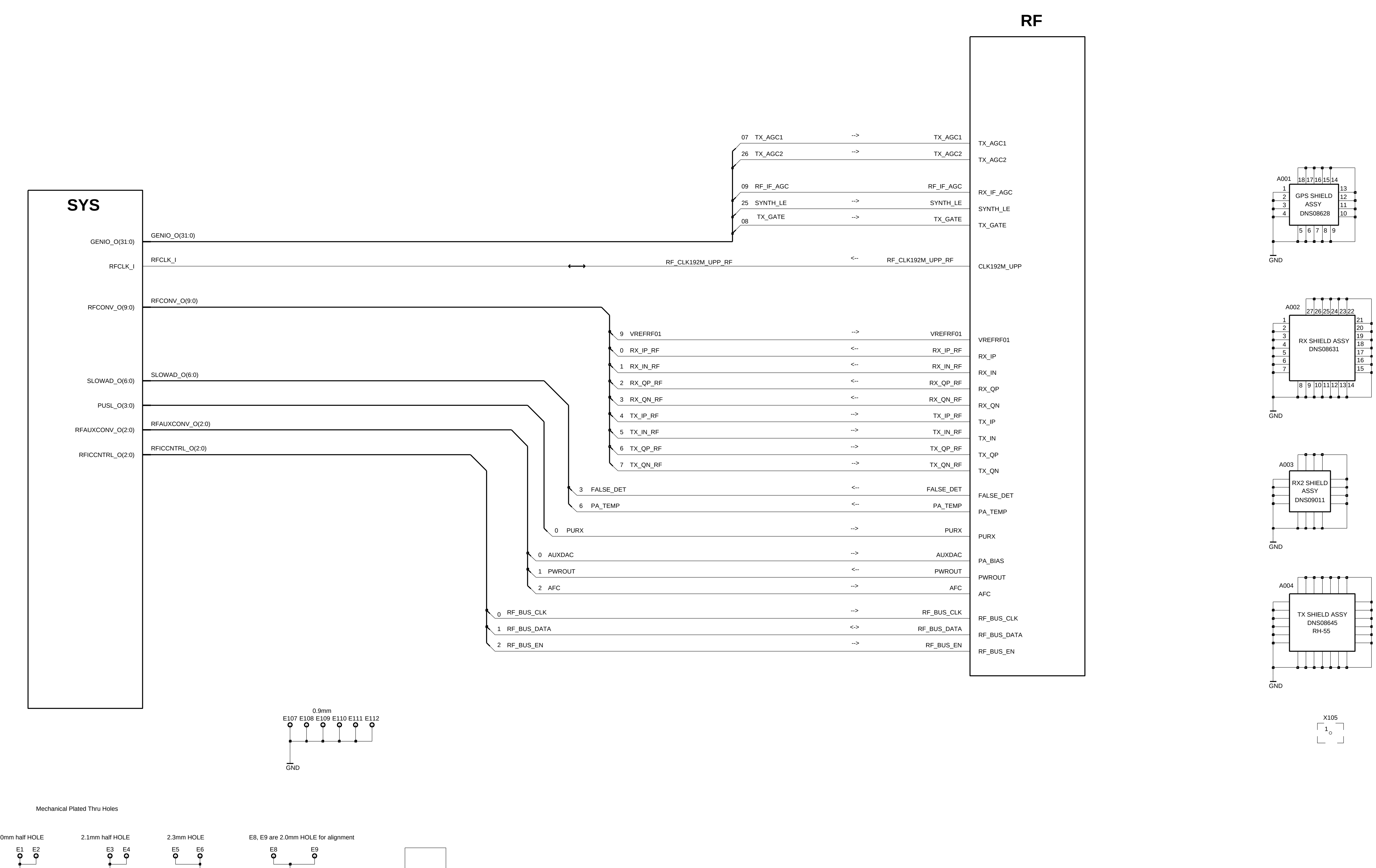
PROD TEST PATTERN

UHF Synthesizer

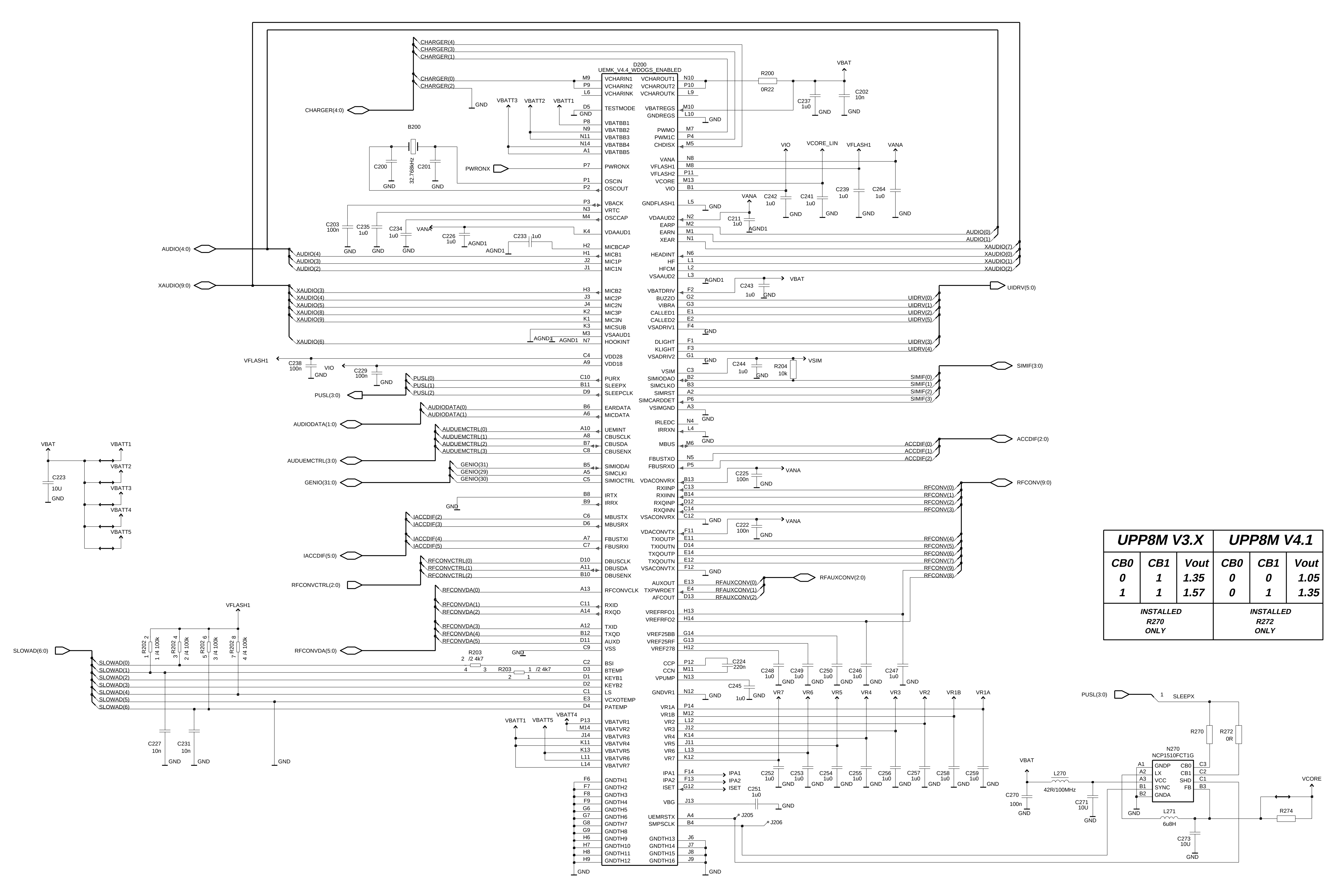
VR3
R501
10R
C501
1u0
GND
C502
10n
GND
AFC
R502
10k
C503
1n0
GND
G501
+DC
VC
NKG3178B
OUT
19.2MHz
GND
GND
C504
470p
F_REF_TX
C505
470p
F_REF_RX
R517
100R
VR3
R513
3k3
NOT_INSTALLED
R514
330R
NOT_INSTALLED
C523
470p
NOT_INSTALLED
CLK19M2_UPP
C506
470p
C524
10p
NOT_INSTALLED
V501
BC848BL3_E6433
NOT_INSTALLED
R515
3k3
NOT_INSTALLED
R516
120R
NOT_INSTALLED
C522
1n0
NOT_INSTALLED
GND
GND
GND
SYN01
SYNTH_LE
RF_BUS_DATA
RF_BUS_CLK
N501
LMX2310USLDX
13 LE
12 Data
10 Clock
C507 470p
6 OSCin OSCout 8
20 Vp CPo 2
16 Vuc
5 Finb FoLD 9
4 Fin FL 19
15 CE
18= VPLL
3,14,= GND
VR1A
R503
10R
C508
10n
GND
C509
100n
GND
VIO
C510 47p
GND
R504
150R
DO NOT CHANGE COMPONENENT TYPE
C511
3n3
GND
R507
3k9
C512
33n
C520
6n8
GND
R505
10k
R506
10k
C513
1n0
GND
C514
1n0
GND
VR4
R518
0R
C515
1u0
C516
10n
GND
G502
3 VCC 6
ENFVJ5A2F10
BS
1 VT OUT 4
G G G G
2 5 7 8
GND
L502
3n3H
PCS_CELL_LO
R512
2k2
C521
10n
GND
C517
1p8
BAND_SEL_VCO



Top Level

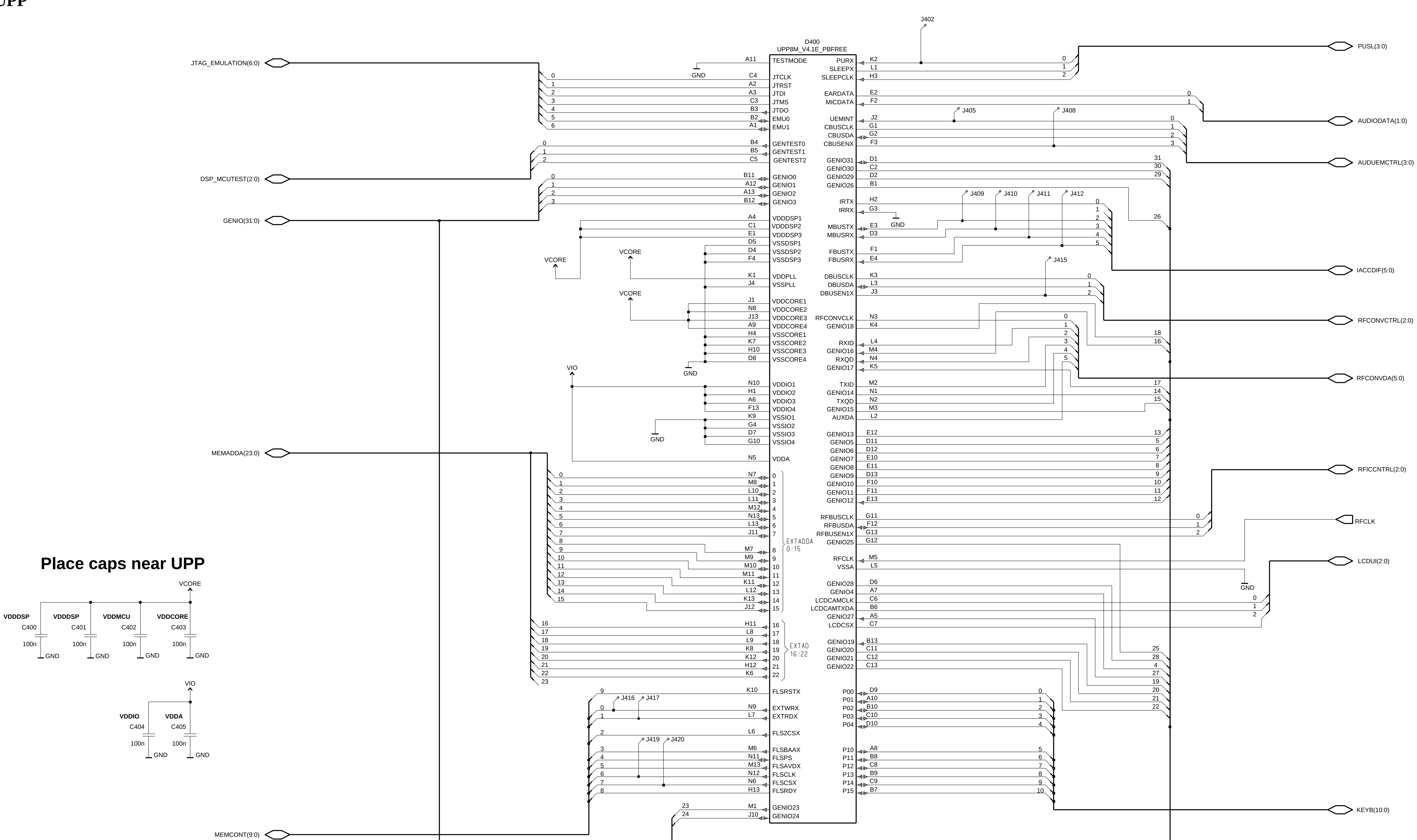

RF
SYS
GENIO_O(31:0)
RFCLK_I
RFCONV_O(9:0)
SLOWAD_O(6:0)
PUSL_O(3:0)
RFAUXCONV_O(2:0)
RFICCNTRL_O(2:0)
RF_CLK192M_UPP_RF
TX_AGC1
TX_AGC2
RF_IF_AGC
RX_IF_AGC
SYNTH_LE
TX_GATE
CLK192M_UPP
VREFRF01
RX_IP_RF
RX_IN_RF
RX_QP_RF
RX_QN_RF
TX_IP_RF
TX_IN_RF
TX_QP_RF
TX_QN_RF
RX_IP
RX_IN
RX_QP
RX_QN
TX_IP
TX_IN
TX_QP
TX_QN
FALSE_DET
PA_TEMP
PURX
AUXDAC
PA_BIAS
PWROUT
AFC
RF_BUS_CLK
RF_BUS_DATA
RF_BUS_EN
A001
GPS SHIELD ASSY DNS08628
A002
RX SHIELD ASSY DNS08631
A003
RX2 SHIELD ASSY DNS09011
A004
TX SHIELD ASSY DNS08645 RH-55
GND
X105
0.9mm
E107 E108 E109 E110 E111 E112
Mechanical Plated Thru Holes
5.0mm half HOLE
2.1mm half HOLE
2.3mm HOLE
E8, E9 are 2.0mm HOLE for alignment
E1 E2
E3 E4
E5 E6
E8 E9
AGND
AGND1

UEM

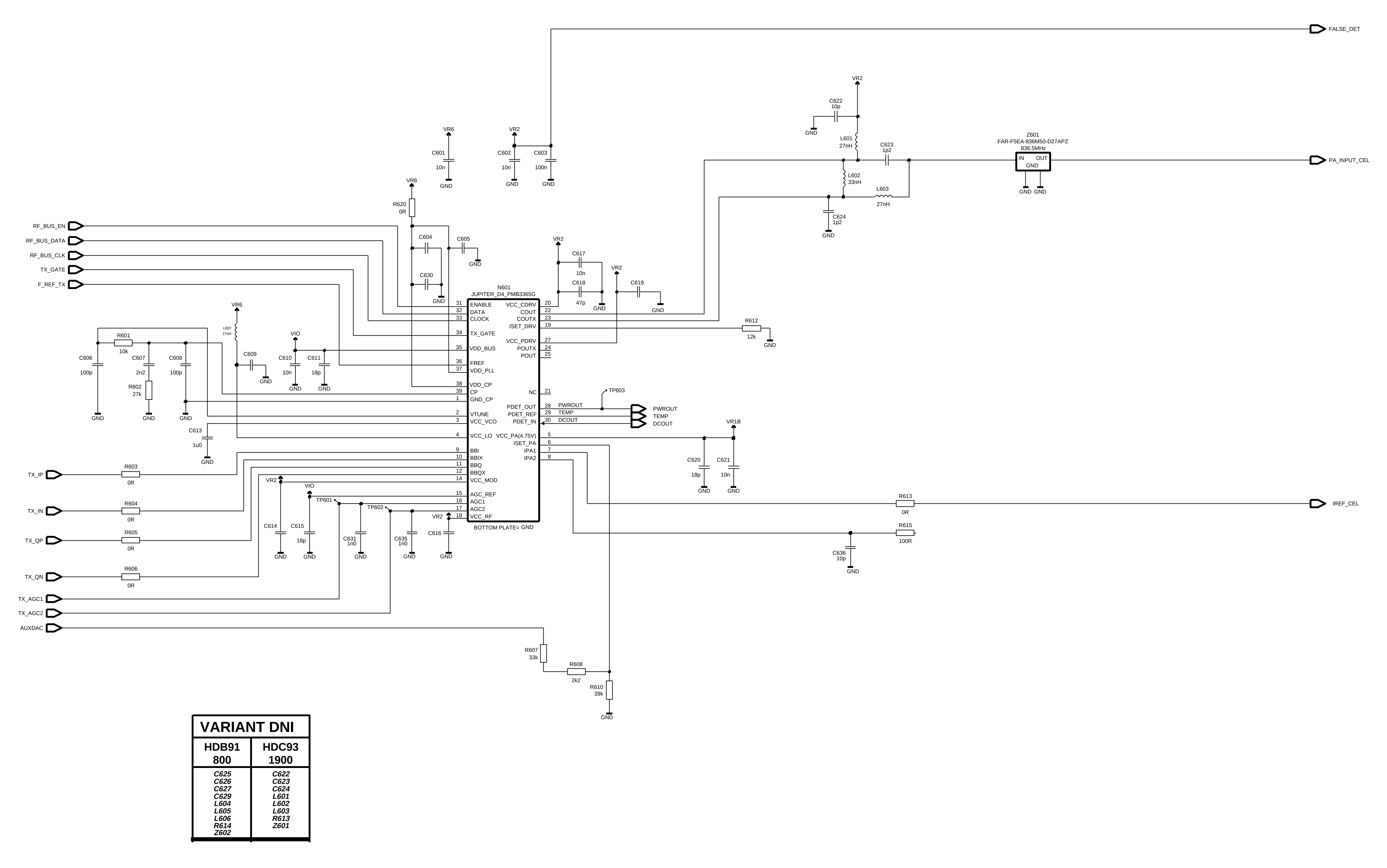


UPP8M V3.X			UPP8M V4.1		
CB0	CB1	Vout	CB0	CB1	Vout
0	1	1.35	0	0	1.05
1	1	1.57	0	1	1.35
INSTALLED R270 ONLY			INSTALLED R272 ONLY		

UPP


D400
UPP8M_V4.1E_PBFREE
JTAG_EMULATION(6:0)
DSP_MCUTEST(2:0)
GENIO(31:0)
MEMADDA(23:0)
MEMCONT(9:0)
PUSL(3:0)
AUDIODATA(1:0)
AUDUEMCTRL(3:0)
IACCDIF(5:0)
RFCONVCTRL(2:0)
RFCONVDA(5:0)
RFICCNTRL(2:0)
RFCLK
LCDUI(2:0)
KEYB(10:0)
TESTMODE
JTCLK
JTRST
JTDI
JTMS
JTDO
EMU0
EMU1
GENTEST0
GENTEST1
GENTEST2
PURX
SLEEPX
SLEEPCLK
EARDATA
MICDATA
UEMINT
CBUSCLK
CBUSDA
CBUSENX
IRTX
IRRX
MBUSTX
MBUSRX
FBUSTX
FBUSRX
DBUSCLK
DBUSDA
DBUSEN1X
RFCONVCLK
RXID
RXQD
TXID
TXQD
AUXDA
RFBUSCLK
RFBUSDA
RFBUSEN1X
RFCLK
VSSA
LCDCAMCLK
LCDCAMTXDA
LCDCSX
VDDA
FLSRSTX
EXTWRX
EXTRDX
FLS2CSX
FLSBAAX
FLSPS
FLSAVDX
FLSCLK
FLSCSX
FLSRDY
EXTADDA 0:15
EXTAD 16:22
VCORE
VIO
GND
Place caps near UPP
VDDDSP
VDDMCU
VDDCORE
VDDIO
VDDA
C400
C401
C402
C403
C404
C405
100n

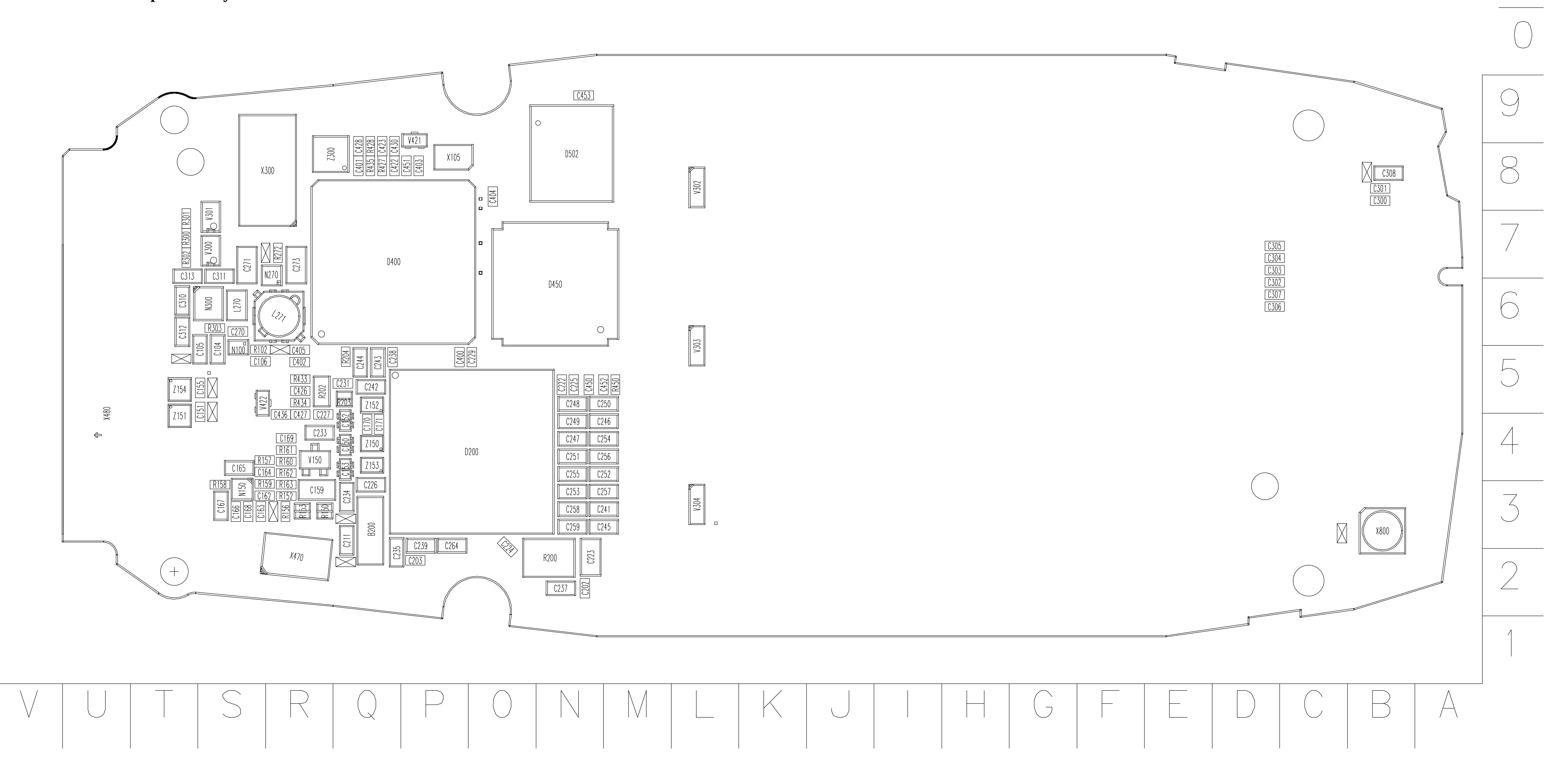
Jupiter



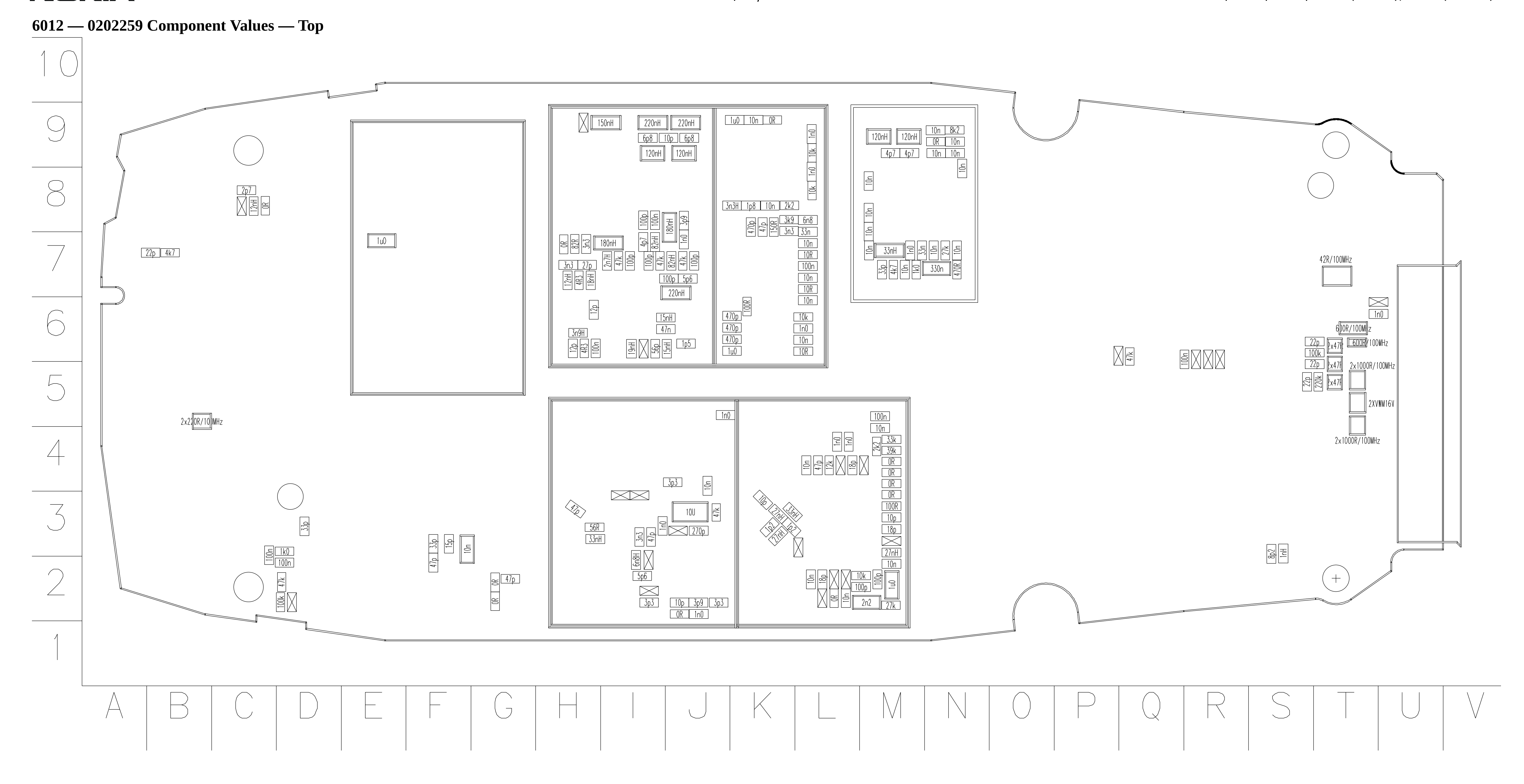
VARIANT DNI	
HDB91 800	HDC93 1900
C625	C622
C626	C623
C627	C624
C629	L601
L604	L602
L605	L603
L606	R613
R614	Z601
Z602	

6012 — 0202259 Component Layout — Top

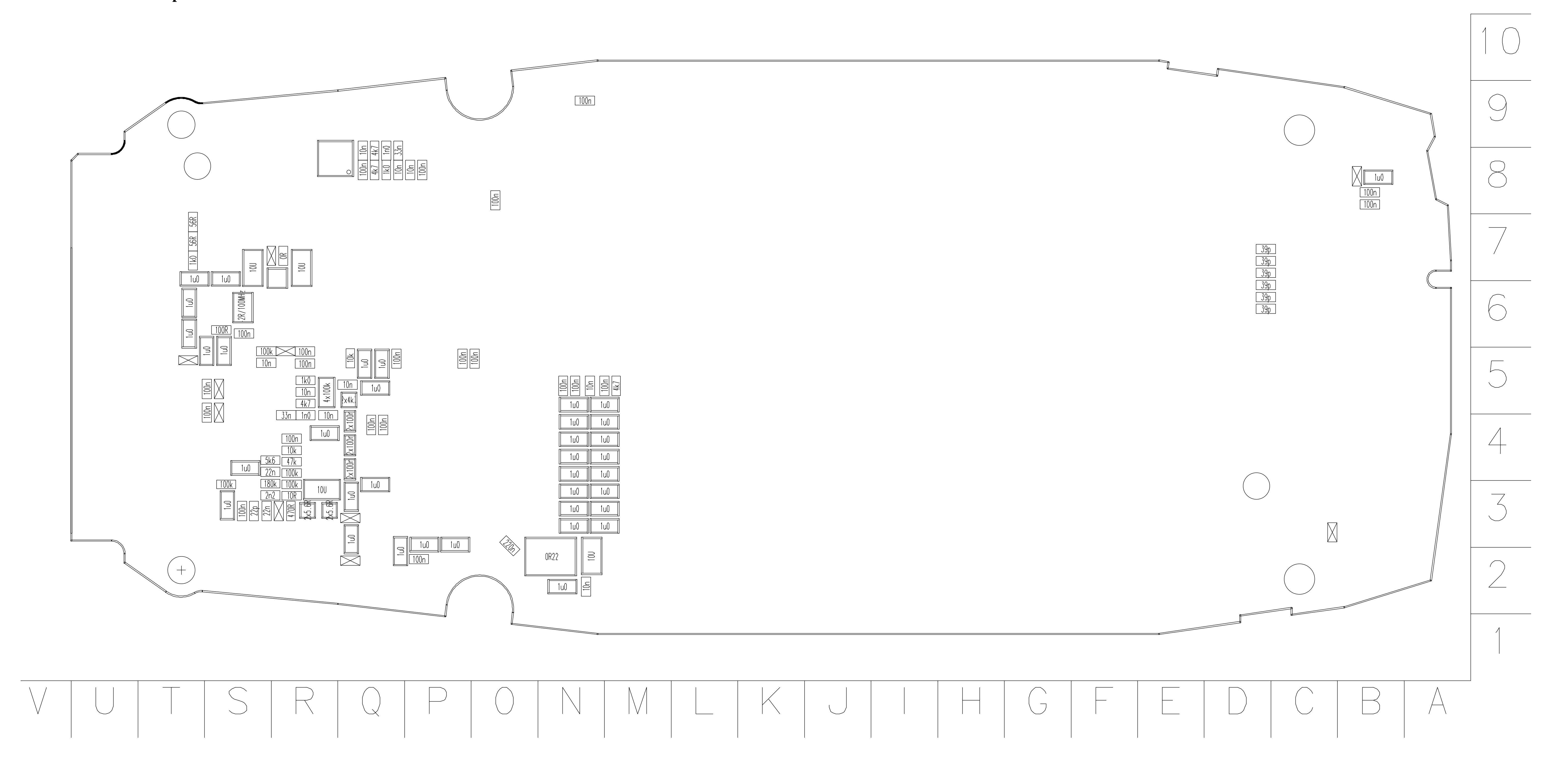
6012 — 0202259 Component Layout — Bottom



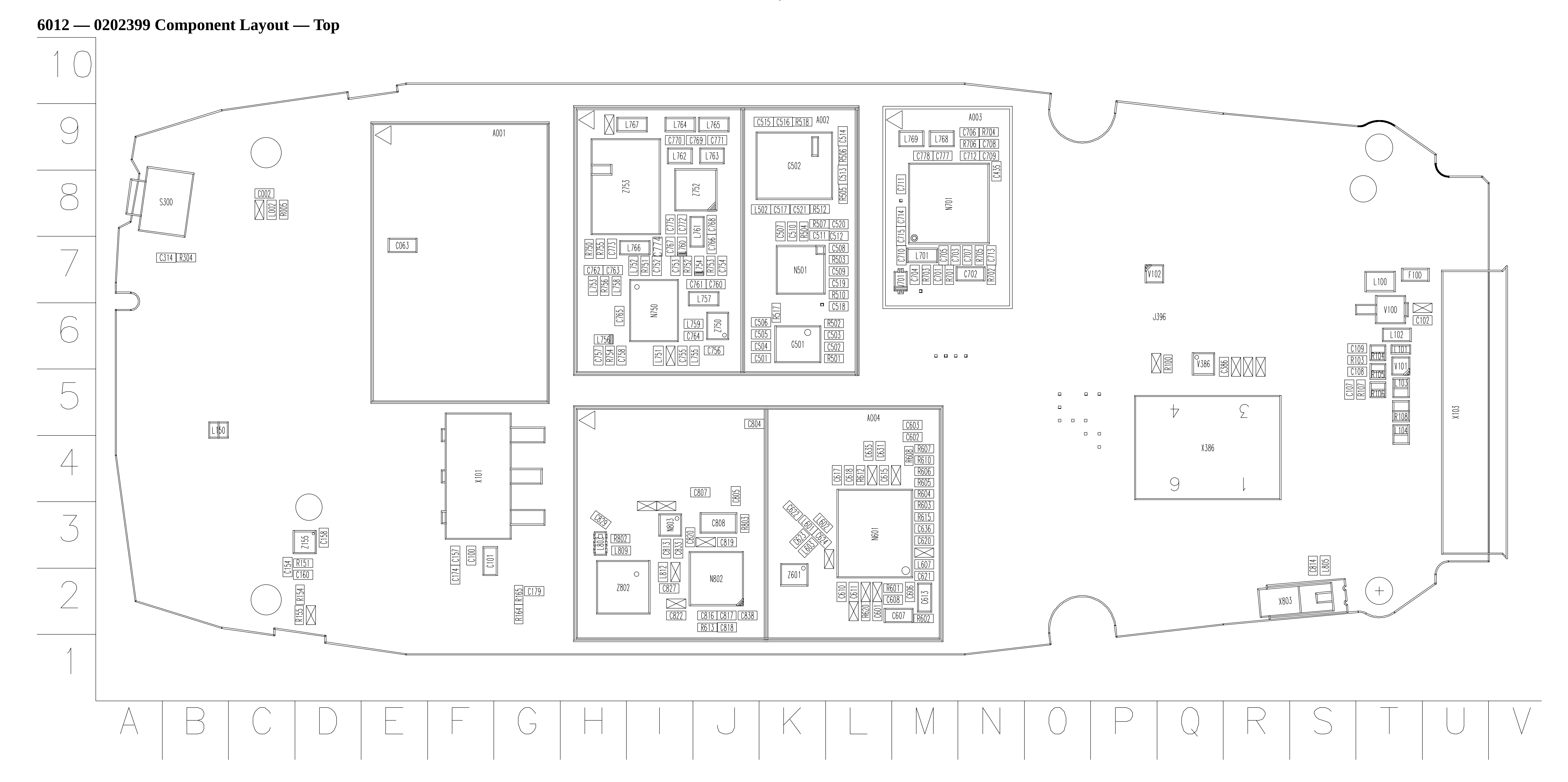
6012 — 0202259 Component Values — Top



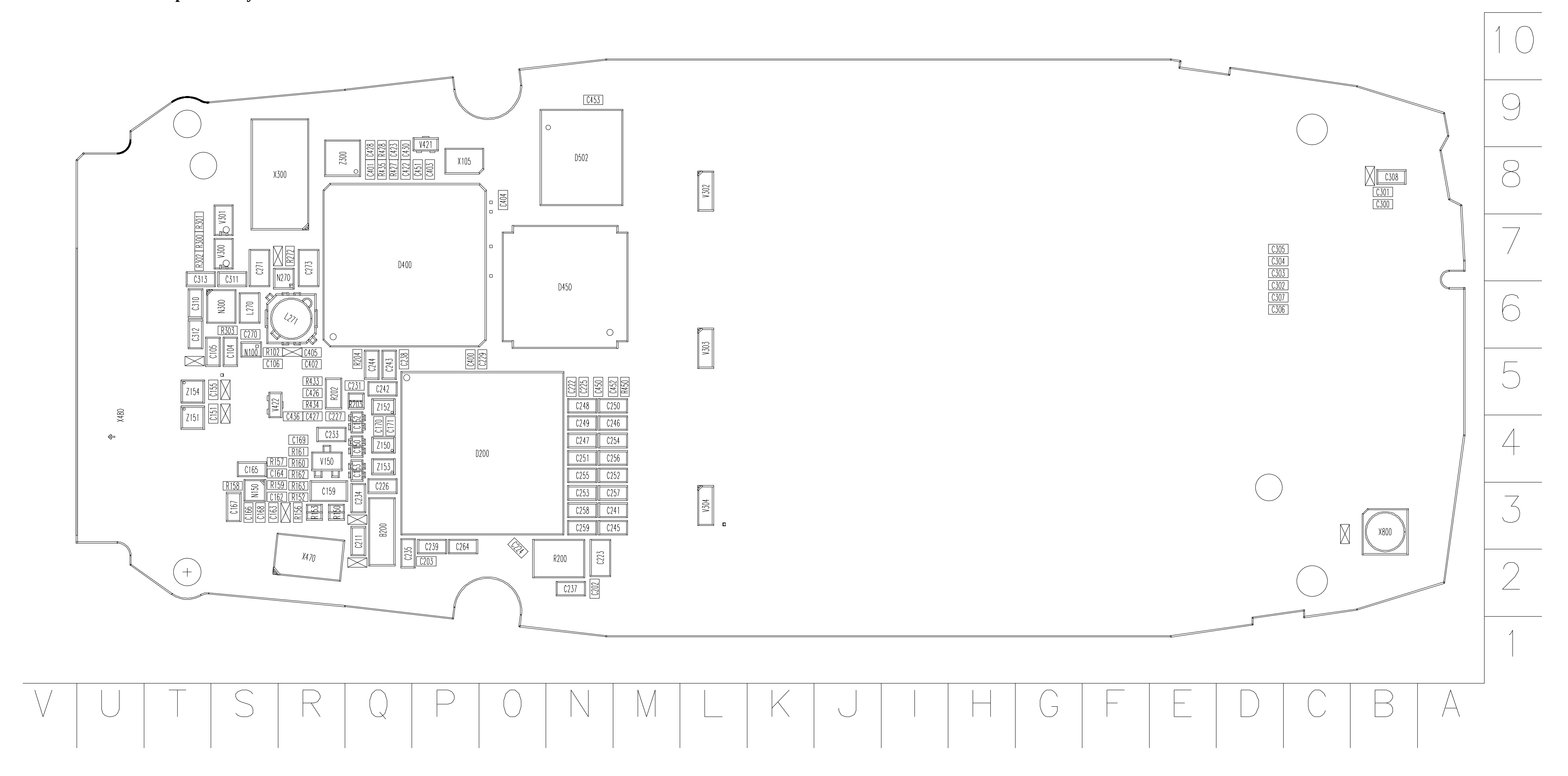
6012 — 0202259 Component Values — Bottom



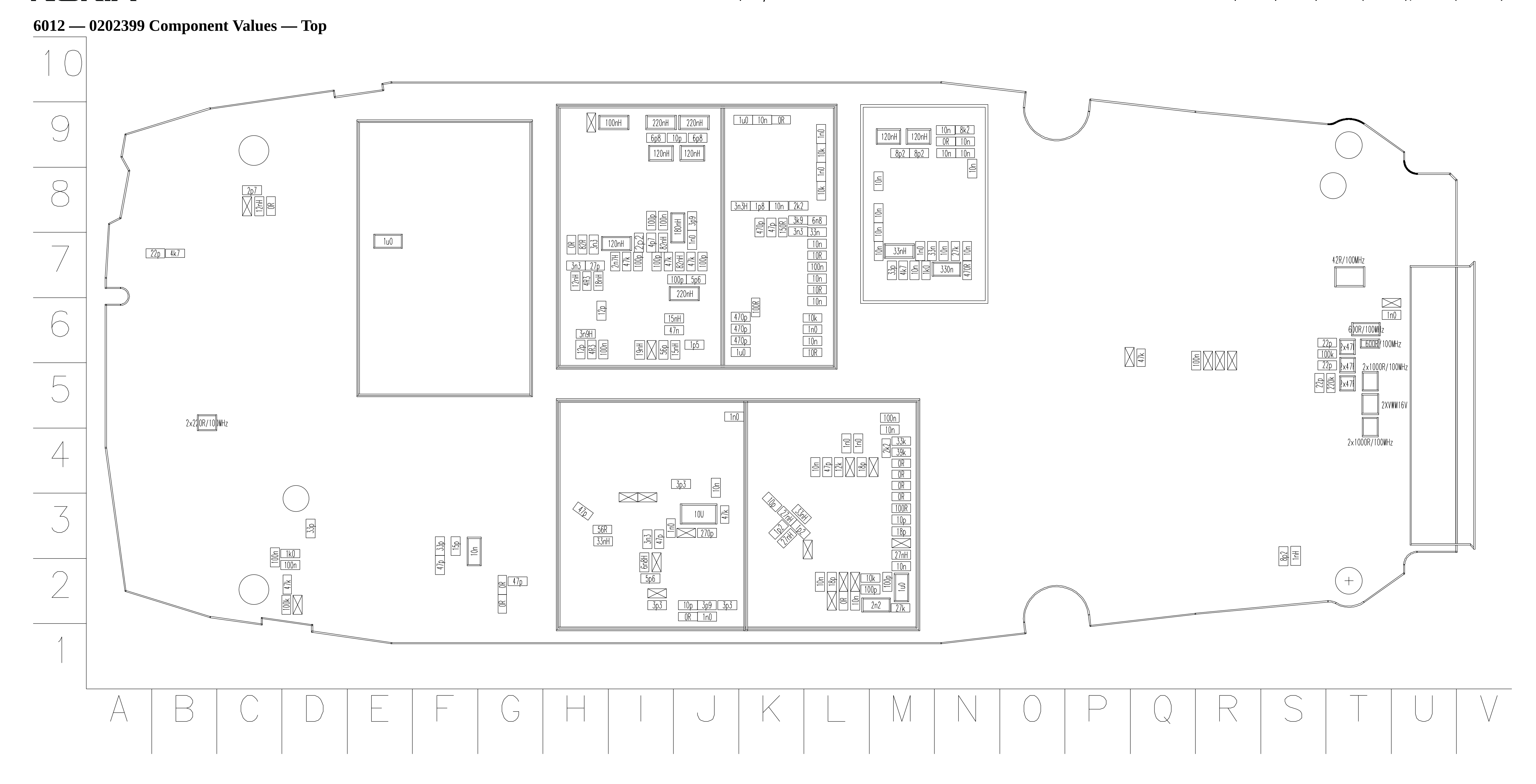
6012 — 0202399 Component Layout — Top



6012 — 0202399 Component Layout — Bottom



6012 — 0202399 Component Values — Top



6012 — 0202399 Component Values — Bottom

